

Technical Data

HAI ARC SPRAY WIRE - HA 524 FeCrAl

Product Code: 22524
 Technical Data Sheet

Revision: # 001
 Dated: 2/13/13

1. INTRODUCTION

HA 524 is an Iron Chrome Aluminum wire for the arc spray process. HA 524 offers excellent corrosion resistance in boiler atmospheres against gases such as vanadium, sulfur, and oxidation temperatures up to 1,600°F. HA 524 can be used to resist heat and prevent oxidation scaling of conventional low alloy steels.

HA 524 offers excellent machinability and is often used for dimensional restoration applications.

HA 524 is designed to operate in all Arc Spray devices, such as HAI's ARCote 9140, 9140U, 9140UW, TAFA 8830/8835, 9000, 9935, and Sulzer Metco SmartArc arc spray systems.

2. CHEMICAL COMPOSITION

Table 1:

Element	Fe	Cr	Al	Mn	Si
Max Weight %	BAL	26.00	6.00	0.45	1.00
Min Weight %	BAL	20.00	4.50	--	0.40

*Designates Total All Other impurities

3. PHYSICAL PROPERTIES

3.1. Wire Physical Properties

Wire Size(s) diameter	1/16" Diameter	1.6 mm Diameter
Spool Size	OD 12"x 4" wide"; Bore ID 2"	Ø300x100 mm; Bore Ø50 mm
Spool Weight	25 lb. each	11.4 kg each
Length of Wire per lb. (1/16")	104 ft	31 m

3.2. Coating Physical Properties

Micro Hardness R _b	85 - 90	
Porosity	< 1 % (as sprayed)	< 1 % (as sprayed)
Melting Point	2,770°F	1,520°C
Bond Strength	6,300 psi @ 0.02" thick	44 MPa @ 20mm thick
Deposit Efficiency	Approx. 70%	Approx. 70%

4. SPECIFICATIONS

STANDARD GRADE

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5. USEFUL SPRAY DATA

Spray Rate	10 lbs./hour/100 amps	4.54 kg./hour/100 amps
Coverage	0.8 oz./ft. ² /0.001"	0.98 kg/m ² /100 microns
Coating Density	7.1 gm./cc	--
Coating Weight	0.0375 lbs/ft ² /mil	--

6. Spray Parameters

	Metallic Substrates
Atomizing Air Pressure: Primary Air	50 - 60 PSI
Atomizing Air Pressure: Secondary Air	--
Arc Load Voltage	28 - 30 Volts
Ampere	100 - 200 Amps
Standoff Distance	4 - 6 inch
Transverse speed	250 inch/min
Coating thickness/Pass-mills	5 mils

7. APPLICATION

7.1. Service Environment

Special care is required to maintain a clean surface prior to arc spraying. Coatings sprayed with HA 524 will bond fairly well without a bond coat. However, in some instances a Ni Al 95/5 (HA 775) layer maybe required for self-bonding to the surface of the part.

7.2. Overheating

Although the Arc spray process is considered a "Cool" process, please take special care not to overheat or burn the surface(s) of the part of component. HA 524 is an Iron Chrome Aluminum based product and dust overspray can burn and smolder.

SPECIAL SAFETY INSTRUCTIONS

High chrome steel based alloys are highly sensitive to air and oxygen and as such special care is required to make sure the material does not burn or smolder in the dust collector or dust collection barrels.

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Please consult your local Fire & Safety Official for instructions on how to handle high chrome steel and high chrome steel based dusts.